

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

MICHAEL PHILIP KAUFMAN,

Plaintiff,

-v-

SALESFORCE.COM, INC.,

Defendant.

Case No. 1:20-cv-6879

Jury Trial Demanded

SALESFORCE'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Plaintiff's ("Kaufman") proposed constructions run counter to the explicit claim language, the intrinsic record, and the understanding of one of ordinary skill in the art as reflected in expert analysis. For the majority of the disputed terms (indeed, all terms other than those at issue in the prior *Microsoft* case, as well as several others), instead of undertaking the required analysis of the intrinsic evidence to arrive at well-reasoned constructions, Kaufman skips over the basics of the claim construction process by asserting these terms should be construed according to some (unstated) "plain and ordinary meaning," without any consideration of the specification or file history. In so doing, Kaufman ignores the basic principle that the words of a claim are given their plain and ordinary meaning *in view of the intrinsic evidence*. See *Choon's Design, LLC v. Idea Vill. Prod. Corp.*, 776 F. App'x 691, 696 (Fed. Cir. 2019) ("[T]he specification... dictates a term's 'plain and ordinary meaning.'"); *United Video Props., Inc. v. Amazon.com, Inc.*, 561 F. App'x 914, 918 (Fed. Cir. 2014); *Lexion Med., LLC v. Northgate Techs., Inc.*, 641 F.3d 1352, 1356 (Fed. Cir. 2011) ("The customary meaning of a claim term is not determined in a vacuum and should be harmonized, to the extent possible, with the intrinsic record, as understood within the technological field of the invention.").

Despite advocating for such "plain and ordinary meaning" constructions, Kaufman fails to articulate what those meanings actually are, or identify evidence from the intrinsic record or case citations in support of such alleged "plain and ordinary meaning." In addition to this defect in Kaufman's approach to claim construction, adopting Kaufman's "plain and ordinary meaning" constructions would fail to resolve the dispute between the parties. See *O2 Micro Int'l, Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). In other words, accepting Kaufman's invitation to bypass claim construction would only guarantee confusion for the Court

and jury on the meaning of important claim terms.

With respect to a number of terms, Kaufman faults Salesforce for including a relational database management system (“RDBMS”) in its proposed constructions. Again, Kaufman disregards the intrinsic evidence: the RDBMS is a necessary part of the claims as recited in the express claim language and further confirmed by the specification. *E.g.*, ’981 patent at cl. 1 (“an end-user interface for working with the data within a relational database ***defined within a relational DBMS***”)(emphasis added); Abstract (“A software system automatically and dynamically generates a fully functional user interface (UI) based upon, and connected directly to, an underlying data model (as instantiated within a relational database management system (RDBMS)).”). Although Kaufman argues against inclusion of “RDBMS” in such claim constructions, elsewhere in his brief he argues the claims must be read within that framework. *See, e.g.*, Kaufman’s Opening Claim Construction Brief, Dkt. 47 (“Kaufman Br.”) at 13 (“The ’981 patent claims take the database structure (‘data model’) as a given: ‘a method ... for automatically generating an end-user interface for working with the data *within a relational database defined within a relational DBMS.*’”). Moreover, the requirements of the RDBMS are, for multiple terms, dictated by express definitional statements in the specification, including through recitation of the “invention,” as well as the use of quotation marks.

Accordingly, each of Salesforce’s proposed constructions should be adopted.

II. DISPUTED TERMS

A. Terms from the ’981 Patent

1. “automatically generating”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
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“generating the UI, without any custom software programming or any other user intervention, by performing steps (a), (b), and (c) after an end-user trigger”	This term should be construed instead as the term “automatic(ally),” as was done in the prior litigation, <i>i.e.</i> , “No separate developer input is required”
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While this is one of the few terms for which Kaufman provides some citation to the specification, Kaufman ignores the express and repeated definitional statements in the “Background of the Invention,” “Field of the Invention,” and “Brief Summary of the Invention,” where the claimed invention is defined as the automatic generation of the UI without any custom software programming. *See, e.g.*, ’981 patent at 2:20-27; 3:8-12; Dkt. 48 at 4-6. Kaufman never addresses that these statements limit the scope of the claim term “automatically generating.” *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (“When a patent thus describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.”); *AstraZeneca AB v. Hanmi USA, Inc.*, 554 F. App’x 912, 915-16 (Fed. Cir. 2013) (finding a statement about “the present invention” to limit claim scope); *SciMed Life Sys. v. Adv. Cardiovascular Sys.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001) (statement about “the present invention” made it “difficult to imagine how the patents could have been clearer in making the point” that a limitation “was a necessary element of every variant of the claimed invention”); *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015) (“We have found disavowal or disclaimer based on clear and unmistakable statements by the patentee that limit the claims, such as ‘the present invention includes...’ or ‘the present invention is...’”); *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed Cir. 2006).

Kaufman incorrectly contends that his proposed construction was previously “found” by Judge Hellerstein. Kaufman Br. at 5. Rather, the parties presented Judge Hellerstein with a stipulated construction agreed to between Microsoft and Kaufman. Dkt. 47-3. Judge Hellerstein did not adjudicate any dispute concerning this term, and the previous stipulated construction

should not be entitled any preclusive or persuasive weight in this case. In fact, before the stipulated construction, Kaufman urged Judge Hellerstein to construe “automatically generating” as “the ‘generating’ – comprising steps (a), (b), and (c) – is carried out upon being triggered by a user, without requiring further intervention by the user in order to complete the generation of the UI.” Dkt. 50-4 at 10-11. To the extent a prior construction should be consulted, it is this one expressly advocated by Kaufman (which is reflected in Salesforce’s proposed construction).

Next, Kaufman notes, but does not grant any import to the specification’s repeated mention of “without any custom programming,” as well as its criticism of the prior art. Kaufman Br. at 5-6. Kaufman says that “without any custom programming” is “not a definition on its own” and that Salesforce’s construction “ignores the other above-quoted language of the specification.” *Id.* at 6. Both of these arguments miss the mark. The specification makes clear that the automatic generation of the user interface is done without any custom software programming, and that is a central, necessary part of the described and claimed invention. No separate lexicography is required. Moreover, all of the material cited by Kaufman is consistent with Salesforce’s proposed construction. Compared with Kaufman’s construction, Salesforce’s is more true to the specification’s terminology. For example, the specification never uses the term “developer input,” much less “separate developer input.” It is not clear what that means, or how it would differ from the term that the specification does use—“custom software programming.” A person of ordinary skill would not use Kaufman’s proposed language that “no separate developer input is required” when the specification itself uses precise alternative language regarding “custom software programming.” Declaration of Dr. Douglas C. Schmidt in Support of Salesforce’s Opening Claim Construction Brief, Dkt. 49 (“Schmidt Decl.”) at ¶ 51.

The specification also repeatedly disparages and distinguishes prior art that used any

custom software programming, which indicates that the claims should not be construed to cover the criticized prior art. *See, e.g.*, '981 patent at 2:53-56 ("Moreover, the construction of front-end applications is generally undertaken using conventional third- or fourth-generation computer languages, which require by-hand coding at a very low level of functionality."); 3:1-4; *see also id.* at 2:48-52. Kaufman agrees that these statements from the specification were used "in distinguishing other systems." Kaufman Br. at 5. The solution to these problems proposed by the patent is a fully automatic system for generating a user interface without any custom software programming. '981 patent at 2:23-27. This is the core of the purported invention, and it would be improper to expand the scope of the claims to cover systems that use precisely the same manually-coded approach as the prior art. *See, e.g., Indivior Inc. v. Dr. Reddy's Labs., S.A.*, 930 F.3d 1325, 1337-38 (Fed. Cir. 2019) ("The specification is the single best guide to the meaning of a disputed term, and where it makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent.").

As to the other parts of Salesforce's construction, Kaufman concedes that "the specific claim steps recited all take place 'automatically' *after being triggered by the user.*" Kaufman Br. at 5 (emphasis added); *see also id.* at 6 ("'Automatic' / 'automatically' means that *steps (a), (b), and (c)* in the '981 patent's Asserted Claims *are carried out upon being triggered by a user . . .*") (emphasis added). But it is Salesforce's construction, not Kaufman's, that reflects that steps (a), (b), and (c) occur "after an end-user trigger." Kaufman's construction is that "no separate developer input is required," which is unsupported by the specification.

Lastly, as to the phrase "any other user intervention," Kaufman contends, with nothing more than attorney argument, that "[t]here can be user intervention apart from the steps of the claims of the '981 patent." Kaufman Br. at 6. Kaufman is incorrect: there is no mention in the

specification of any user intervention in the process of generating the UI. To the contrary, the end user employs the user interface to interact with the system, and before the interface has been constructed according to the claimed steps (a), (b), and (c), there is no opportunity for user intervention. '981 patent at 2:39-40 (“[A] ‘front-end’ presentation layer or user interface”—which is constructed during the claimed steps—“mediates the end-users’ work with the back-end data.”); 3:19-22 (“It is a further object of the invention *to present to end-users*, for any arbitrarily complex or large database, a comprehensive application through which the back-end can be operated”). Kaufman in fact does not dispute this point. *See* Kaufman Br at 13 (“As is clear from the claim language, to create the end-user interface, a database is scanned for its data model and, from the scan, a client application is created with the above-described capabilities.”).

2. “data model”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“the complement of tables, their columns and datatypes, constraints, and relationships across tables, used by the back-end RDBMS for storing data”	Plain and ordinary meaning as set forth in the claim: “a data model comprising tables and their column-complements and datatypes, constraints, and the relationships across tables”

As noted in Salesforce’s Op. Br. at 9-10, the patentee acted as his own lexicographer on this term by expressly defining it:

Developing such a database system consists both in defining *the organizational structure to be used by the back-end for storing data (that is, the complement of tables which store data, and the relational links between these tables)—known as a “schema” or “data model”*

'981 patent at 2:41-45 (emphasis added). It is black letter law that the use of “that is” (or “i.e.”) and quotation marks signifies lexicography by the patentee, as here. *See SkinMedica, Inc. v. Histogen, Inc.*, 727 F.3d 1187, 1200 (Fed. Cir. 2013) (“In a specification, a patentee’s use of ‘i.e.’ signals an intent to define the word to which it refers.” (internal quotation marks omitted)); *Sinorgchem Co., Shandong v. Int’l Trade Comm’n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007). In this

passage, the term “that is” refers to “organizational structure,” thus defining it as “the complement of tables which store data, and the relational links between these tables.” At the same time, the patent specifies here that “the organizational structure to be used by the back-end for storing data” is “*known as a . . . ‘data model.’*” Furthermore, by reciting the term “back-end” with quotation marks in the specification, the patentee expressly defined it as a “relational database management system (RDBMS).” ’981 patent at 2:33-35 (“At a minimum, such systems are generally composed of a ‘back-end’ relational database management system (RDBMS)”); *see Sinorgchem*, 511 F.3d at 1136. Inserting the definitions of “organizational structure” and “back-end” into the definition of “data model” (*i.e.*, “the organizational structure to be used by the back-end for storing data”) reveals the patentee’s definition of “data model”: “the complement of tables which store data, and the relational links between these tables to be used by the RDBMS for storing data.” Salesforce’s proposed construction of “data model” tracks this definition:

Patentee express definition of “data model” in Specification	“the complement of tables which store data, and the relational links between these tables to be used by the RDBMS for storing data”
Salesforce’s Proposed Construction	“ <i>the complement of tables</i> , their columns and datatypes, constraints, <i>and relationships across tables, used by the back-end RDBMS for storing data</i> ”

Kaufman cites several cases to argue that Salesforce’s proposed construction of “data model” is an attempt “to improperly limit this term [by] add[ing] the phrasing ‘used by the back-end RDBMS for storing data. However, the cases simply stand for the proposition that the term “comprising” indicates an open-ended claim in which only “the named elements” limit the claim. *Mars, Inc. v. HJ Heinz Co.*, 377 F.3d 1369, 1376 (Fed. Cir. 2004); *see also Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368 (Fed. Cir. 2003); *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997). These cases are inapposite because here the claims and specification expressly define “data model” as used by the back-end RDBMS for storing

data, and thus basic claim construction principles warrant the limitation. Dkt. 48 at 8-10.

Compared to Salesforce’s proposed construction, Kaufman’s construction of plain and ordinary meaning for “data model” suffers several flaws. First, it is well settled that “[w]hen a patentee explicitly defines a claim term in the patent specification, the patentee’s definition controls,” over any other conventional meaning. *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380 (Fed. Cir. 2009); *see also Honeywell Int’l, Inc. v. Universal Avionics Sys. Corp.*, 493 F.3d 1358, 1361 (Fed. Cir. 2007); *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1374 (Fed. Cir. 2003). As such, Kaufman “must be bound by the express definition.” *Sinorgchem*, 511 F.3d at 1136. Second, Kaufman’s alternate construction of “data model” is inconsistent with the patentee’s express definition set forth within the ’981 patent specification. Comparing Kaufman’s construction with the express definition of “data model” within the ’981 patent specification reveals the critical flaws in Kaufman’s construction:

Patentee express definition of “data model” in Specification	“the complement of tables which store data, and the relational links between these tables <i>to be used by the RDBMS for storing data</i> ”
Kaufman’s Proposed Construction	“a data model comprising tables and their column-complements and datatypes, constraints, and the relationships across tables”

As shown, Kaufman’s construction fails to include the express requirement that the complement of tables, relationships, and constraints be “used by the RDBMS for storing data.”

3. “scan[ning] said database”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“automatically read[ing] through the data model of the RDBMS without using pre-existing knowledge of its structure”	Plain and ordinary meaning

Salesforce’s proposed construction accurately represents the claimed invention and directly tracks the claim language. A primary advantage of the claimed system is the ability to

work with pre-existing databases “of any arbitrary size or complexity.” ’981 patent at cls. 1, 4, 5; 2:65-3:1 (“Even with such tools, considerable work remains in building a complete, fully-functional UI for a back-end schema of any appreciable size or complexity—especially where industrial-grade performance and reliability is required.”). Kaufman himself agrees. Kaufman Br. at 2 (“[T]he ’981 patent discloses and claims taking a *pre-existing database* and automatically generating a fully-functional user application”); *id* at 13 (“[T]he claims presume one is handed a given, existing database”). And the claims further require scanning the existing database to determine its characteristics. *E.g.*, ’981 patent at cl. 1 (“causing said server to scan said database and apply a body of rules to determine the table structures, constraints and relationships of said data model, and store representations thereof in machine-readable media accessible to said server”). Such scanning step is a necessary step of the described and claimed invention because the UI generation software does not already know the structure of the database (*i.e.*, the contents of the data model). Because the claimed invention can adjust to any database, it is more useful, and does not need to rely on any specific knowledge about any specific database. Kaufman’s proposed “plain and ordinary meaning” construction does not reflect this critical aspect of the claimed invention, and would indeed potentially allow such criticized prior art systems to fall within the scope of the claims. Schmidt Decl. ¶¶ 54-58.

Kaufman’s counter-argument rests on a misconception about re-scanning the database. Kaufman states: “By necessity, a secondary scan of the data model would mean there is already pre-existing knowledge of its structure.” Kaufman Br. at 16 (citing ’981 patent at 345:16-346:16). Kaufman is wrong: nothing in the cited portion of the ’981 patent describes using information from the first scan to perform the second scan. Precisely the opposite: the second scan is where the system “re-interrogates the database,” as the specification makes clear. ’981

patent at 345:23-24. Indeed, a database can be re-scanned a second time without using any information derived from the first scan. *See* Supplemental Declaration of Dr. Douglas C. Schmidt filed with this brief (“Supp. Schmidt Decl.”) ¶ 15. And the specification is also clear that a database interrogation, or scan, is an automatic read-through without pre-existing knowledge. *E.g., id.* at 3:41-47 (“The UI is built based on an automated interrogation of the RDBMS, either as needed (on-the-fly) or by building an in-memory representation of the data model.”); 3:13-16 (“It is another object of the invention that, once a back-end schema has been designed and constructed within the RDBMS, the system can automatically ‘interrogate’ this schema, and ‘absorb’ its structure into an internal cache . . .”). Accordingly, Kaufman’s proposed “plain and ordinary meaning” construction is improper, ignores the intrinsic evidence, and does not resolve the dispute concerning the scope of the claims. *See Every Penny Counts, Inc. v. Am. Express Co.*, 563 F.3d 1378, 1383 (Fed. Cir. 2009); Schmidt Decl. ¶ 55.

4. “apply[ing] a body of rules to determine the table structures, constraints and relationships of said data model”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“interpret[ing], with a body of rules, all table structures, constraints, and relationships of the data model of the RDBMS”	Plain and ordinary meaning

As a preliminary matter, Kaufman’s construction of plain and ordinary meaning for this limitation is inadequate because the parties dispute not just its meaning, but also its scope. “A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate . . . when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” *O2 Micro*, 1360-61 (Fed. Cir. 2008). Here, Salesforce contends that “the table structures, constraints and relationships of said data model” should be interpreted to mean “*all* the table structures, constraints, and relationships of the data model,” (Dkt. 48 at 13; Supp.

Schmidt Decl. ¶¶ 16-19), so adopting a “plain and ordinary meaning” would not resolve the parties’ dispute regarding its scope. This limitation therefore requires construction.

Kaufman also argues that the combination of Salesforce’s proposed constructions of “data model” and “apply[ing] a body of rules to determine the table structures, constraints and relationships of said data model” is “redundant and inappropriately limiting.” Kaufman Br. at 17. But Kaufman fails to identify what term is inappropriately redundant or limited. As explained above in Section II.A.2, the patentee expressly defined “data model” to include “the complement of tables . . . and the relational links between these tables to be used by the RDBMS,” so the inclusion of the term “RDBMS” in Salesforce’s proposed construction is not redundant. And, to the extent Kaufman alleges Salesforce’s proposed construction improperly limits the term “data model,” he is incorrect. Salesforce’s proposed construction simply identifies the portions of the “data model”—*i.e.*, “all table structures, constraints, and relationships”—interpreted with the body of rules, as defined in the specification.

5. “said client application provides a connection to said database”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“the client application is directly connected to the data model”	Plain and ordinary meaning

Kaufman asserts that the phrase “said client application provides a connection to said database” needs no construction and should be given its plain and ordinary meaning because “[t]hese words are clear to . . . a person of ordinary skill in the art.” Kaufman Br. at 18. But Kaufman offers no evidence, whether intrinsic or extrinsic, to support this assertion; only “[a]ttorney argument [which] is not evidence.” *Icon Health and Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017). And contrary to Kaufman’s contention, the meaning of this phrase does not have a readily understood meaning to a person of ordinary skill in the art absent

the context of the intrinsic evidence. *See* Supp. Schmidt Decl. ¶¶ 20-21.

Kaufman also asserts that Salesforce’s construction is wrong because the client “application is not connected to the data model, which is a description of the database,” but he is mistaken. The data model as defined in the specification is not simply a “description” of the database but is “the complement of tables . . . and the relational links between these tables to be used by the RDBMS for storing data.” *See supra* Section II.A.2. In other words, to interoperate with the database structure in the context of the claims of the ’981 patent, a client application must be connected—without intermediaries—to the data model. *See* Schmidt Decl. ¶ 21.

In contrast, Salesforce has shown how the intrinsic evidence supports its proposed construction, identifying specific citations to the specification—including the Abstract and the “Brief Summary of the Invention”—defining that the client application is directly connected to the data model. *See* Dkt. 48 14; Supp. Schmidt Decl. ¶ 22. Furthermore, Salesforce pointed out how, consistent with these express limitations, the specification’s disclosure of “accomplish[ing] database connectivity through the use of connection pooling,” wherein “a specified number of connections are pre-made to the underlying RDBMS,” discloses that the client application is directly connected to the data model. *See* Dkt. 48 at 14; Supp. Schmidt Decl. ¶ 22.

6. “navigating . . . said relationships across tables”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“moving from a display of data from one table to a display of data from a related table”	“Moving from one display of data to a related display of data.”

Kaufman’s construction is flawed in at least two respects: (1) it omits any mention of database tables (which are expressly recited in the claim language), and (2) Kaufman fails to explain how his construction is consistent with or gives meaning to the term “across tables.”

Instead, Kaufman argues that “navigating . . . said relationships across tables” should be

defined as “moving from one display of data to a *related* display of data” because “[t]he relationships exist at the level of table data.” *Id.* (emphasis added). This argument misses the mark by ignoring the plain claim language and express disclosures of the ’981 patent. The claim language explicitly recites “said relationships across tables,” and a POSITA would understand that the phrase “relationships across tables” refers to the tables themselves. Supp. Schmidt Decl. ¶¶ 27-28. The ’981 patent also expressly teaches that relationships exist between database tables, and that related data records in different tables are concrete examples of these relationships. The ’981 patent specification describes “[a] set of ‘relationship types’ *between individual database tables*.” ’981 patent at 6:34-35 (emphasis added). One of these, the “CROSS-REFERENCE,” is a relationship defined by a “foreign key” between two database tables, where the foreign key consists of one or more fields in a database table whose values uniquely identify a record in another table. *See id.* at 6:40-43, 58-60; Supp. Schmidt Decl. ¶ 29. The intrinsic evidence thus discloses that relationships exist between tables apart from any table data.

Kaufman apparently argues that an embodiment disclosed in the specification—*i.e.*, a hyperlink between data records of different database tables—altered the plain meaning of “said relationships across tables” in the claims from the relationship between tables to the relationship between data records within a database table. Kaufman Br. at 11-12. In doing, Kaufman is reading a limitation from an embodiment of the specification into the claims but, except for lexicography and disavowal, courts “do not read limitations from the embodiments in the specification into the claims.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). In this instance, Kaufman does not—and cannot—show that the patentee has either acted as his own lexicographer in defining “said relationships across tables” or made clear that the claimed invention does not include relationships between individual tables.

7. “managing . . . said relationships across tables”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“adding or removing cross-references between tables, such as foreign key columns or foreign key constraints”	“Avoiding the insertion of inappropriate data in and across tables.”

As an initial matter, Kaufman appears to be taking a shifting sands approach to claim construction. First, Kaufman listed “avoiding the insertion of inappropriate data in and across tables” in the Joint Claim Terms Chart. Dkt. 39 at 3. But in the body of its argument, Kaufman appears to advocate for a wholly different construction:

The claim language, when read in light of the specification and the prosecution history, requires managing relationships to mean “managing the relationships of records in a given table with corresponding records in a related table, for example, by way of a dropdown that limits selection of an added or edited value for a record in the given table to the permissible values as exist within the records of the related table.”

Kaufman Br. at 15. Kaufman also includes *another* apparent new proposed construction in his brief. Kaufman Br. at 14 (“‘Managing’ means managing the *data* affecting relationships between individual table *records* (rows).”)¹. Kaufman did not apprise Salesforce of these apparent new constructions. According to the Case Management Plan, the new constructions are untimely and thus waived. Dkt. 26 at 3 (requiring circulation of amended constructions by December 1, 2020, and filing of the Joint Claim Terms Chart by December 9, 2020). Regardless, all of Kaufman’s potential constructions run contrary to the intrinsic evidence.

Kaufman first contends that “Salesforce’s construction completely avoids the necessary ‘changing’ of relationships between individual table records that is part and parcel of the ’981 patent” and that “the entire point of the ’981 patent” is to “manage data within a database.” Kaufman Br. at 12-13. Not so. Changing relationships between table records is already covered

¹ This potential construction is incorrect on its face, as it rewrites the claim language from “relationships across tables” to “data affecting relationships between individual table records.”

by claim limitations regarding an edit mode and “enforcing relational interdependencies among data across said tables.” Supp. Schmidt Decl. ¶¶ 11-12. The claim language explicitly recites “said *relationships across tables*.” A person of ordinary skill would understand that the phrase “relationships across tables” refers to the *tables* themselves—as the claim expressly says—and not individual records *within the tables*. Supp. Schmidt Decl. ¶¶ 30-32. Relationships between tables are formed by cross-references such as foreign key columns or foreign key constraints, so in order to “manage” the relationships across tables the cross-references must be added or removed. *Id.* ¶¶ 33-34. For example, the ’981 patent expressly teaches that relationships exist between database tables apart from data contained in the individual table records. *See* Section II.A.6 above. Since all of Kaufman’s constructions only address particular records within the tables, they do not reflect management of relationships *across tables*, and cannot be correct.

Kaufman is also mistaken when he argues that Salesforce “conflate[s] the database-design/database-administrator activity of defining or altering the relational structure of the database itself with the data-management/end-user activity of entering or updating relational data within the structure so defined by the database designer.” Kaufman Br. at 13. But the specification *expressly* contemplates edits to the schema. *See, e.g.*, ’981 patent at 24:27-29 (“*Specification* and enforcement of correlations, interactions, or interdependencies between disparate data-elements (*either within or across base-tables*)”) (emphasis added); 24:9-22 (system may “deduce”—*i.e.*, create—“relational interdependencies between tables where no explicit referential-integrity constraints have been defined.”). Kaufman fails to consider these portions of the specification, and is simply wrong when he contends that the specification does not describe schema edits. A person of ordinary skill in the art would have understood the specification to fully disclose edits to the database schema. Supp. Schmidt Decl. ¶ 35.

Kaufman commits another error when he urges that “[t]he claims do not concern adding or removing relationships that exist within the database.” Kaufman Br. at 13. This is simply an *ipse dixit* that assumes the proposition that needs to be proved. The express claim language **does** concern adding or removing the relationships “across tables.” And the intrinsic evidence discloses instances of managing those same relationships. ’981 patent at 24:9-29.

Kaufman next incorrectly argues that, since the invention is intended to work with a pre-existing database (Salesforce agrees), the generated user interface cannot be used to alter the database schema by adding or removing cross-references (which is flatly wrong). *See* Kaufman Br. at 12-14 (“Defining, creating, revising, and/or manipulating relationships between *tables* . . . would require that the constructed application have the ability to go back and revise the data model (or ‘schema’) on which it was based.”) (emphasis original). But to the contrary, and as described above, the claim language could not be more clear: the relationships that must be managed are **across tables**. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). That a pre-existing database is used does **not** prohibit the database schema from being altered.

Kaufman also errs when he points to the specification’s disclosure of a specific embodiment where a “CROSS-REFERENCE” field is used to generate a dropdown list with data from the corresponding fields of the referenced database table—thus “preventing the user from entering data that does not exist.” Kaufman Br. at 14-15. But a longstanding principle of claim construction dictates that courts “do not read limitations from the embodiments in the specification into the claims.” *Hill-Rom*, 755 F.3d at 1371. Moreover, this embodiment does not support Kaufman’s new construction: that dropdown list relates instead to the separate claim requirement “enforcing relational interdependencies among data across said tables.”

Finally, Kaufman points to an example in the prosecution history of what the “client

application” can do. Kaufman Br. at 14-15. But the prosecution history also does not support any of Kaufman’s constructions. During the prosecution of the parent application, in an effort to overcome the PTO’s rejection of the claims, Kaufman filed an Office Action Response amending the claims and argued that the amended claims differentiated the claimed invention from the cited prior art. Ex. 29 (U.S. Patent Application No. 10/428,209, Dec. 12, 2006 Office Action Response) at 2-9. In the response, Kaufman argued that one of the prior art references cited by the PTO “d[id] not teach how to construct a ‘client application’ for the database, as that term is used” in the claims. *Id.* at 7. As part of his argument, Kaufman provided an example of how the “‘client application’ contemplated [in the parent application] would allow a user to add a new employee to the Employee table . . . , and in so doing, restrict the user so that the Department that could be entered for the new employee would have to be one of the Departments defined in the Departments table (because of the “foreign key” relation between the two tables).” *Id.* at 8. But once again, Kaufman fails to cite any principle of claim construction supporting this assertion. And Kaufman also fails to explain how arguments made by the patentee during prosecution pertaining to the definition of a claim term (*e.g.*, “client application”) is relevant to the construction of a different and unrelated claim term (*e.g.*, “managing said relationships across tables”) that only appears in the claims of a later-filed patent application. This prosecution history is irrelevant to the construction of “managing said relationships across tables.”

8. “construct a corresponding client application”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“generate a corresponding front-end program without any custom software programming”	Plain and ordinary meaning

Kaufman objects to this construction on the basis that Salesforce’s construction for “automatically generating,” also specifies “without any custom software programming.”

Kaufman Br. at 17-18 (“the requirement is certainly not doubly required”). But the specification expressly links the lack of custom software programming to both the automatic generation of the user interface, as well as the assembly of the corresponding client application. *See, e.g.*, ’981 patent at 2:23-27 (“The ***present invention*** relates to the field of data processing, and more particularly to relational computer databases, and to systems and methods for automatically generating ***without any custom programming*** a user interface for the database, ***and/or a complete application utilizing the database.***”) (emphasis added). The claims encompass both the automatic generation of a user interface and the automated construction of a client application. *Id.* at cls. 1, 4, 5. In fact, the constructed client application provides the generated user interface. *E.g.*, *id.* at cl. 1 (“***defining a user interface paradigm comprising a set of modes . . . construct a corresponding client application for access through said user display and input devices, wherein said client application . . . provides displays of the table contents of said database for each of said modes in accordance with the display formats of said paradigm***”) (emphasis added). Thus, for the same reasons listed above in Section II.A.1 in the context of the “automatically generating” term, this term should be construed as “generate a corresponding front-end program without any custom software programming.” *See also* Schmidt Decl. ¶ 53.

9. “mode”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“a method of interacting with a database table”	“A manner of interacting with a computer program to accomplish a given task.”

Kaufman agrees that Salesforce’s construction “is not far off from reality.” Kaufman Br. at 7. Kaufman contends that “mode” is more generalized than “interacting with a database.” *Id.* But the claim language explicitly requires “a set of modes for interacting with a given database table,” and no other type of mode is contemplated by the claims or specification. *E.g.*, ’981

patent at cl. 1. Kaufman also faults Salesforce’s construction as “limited to interacting with a single database ‘table’” and says that the claimed retrieve mode “can draw data from multiple data tables.” Kaufman Br. at 7. But again, the claim specifies “a set of modes for interacting *with a given database table.*” ’981 patent at cl. 1 (emphasis added). Kaufman’s position runs directly counter to the claim language, and thus cannot be correct. *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1377 (Fed. Cir. 2005) (“Claim construction begins with the intrinsic evidence of record, looking first to the claim language itself to define the scope of the patented invention.”).

10. “representing . . . said relationships across tables”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
“representing relationships among data in different tables”	“Visually representing relationships among data in different tables.”

Kaufman fails to address the apparent inconsistency in his proposed constructions between the three “representing,” “navigating,” and “managing” terms. Kaufman Br. at 8. The claim language on its face requires that the client application “integrates into each said mode *display processes* for representing, navigating, and managing said relationships across tables.” *E.g.*, ’981 patent at cl. 1 (emphasis added). All three functions, therefore, must have a visual display process, and it is inconsistent to require in the claim construction that the “representing” function is “visually” but not the other two functions. Supp. Schmidt Decl. ¶ 26.

Further, as with the “managing . . . said relationships across tables” term, Kaufman appears to disregard the construction that he provided in the Joint Claim Terms Chart, and in the body of its argument, advocates for completely different language:

Thus, when viewed in light of the specification, “representing . . . relationships across tables” means *visually representing at least the existence of a relationship from each data record in the table being viewed (the “viewed table”) to the corresponding record in another table (if any) according to the data model for the database.* This was the construction that Kaufman advocated, over Microsoft’s objection, in the Microsoft case, and which Judge Hellerstein

properly found.

Kaufman Br. at 11. Kaufman did not apprise Salesforce of this new construction, which significantly differs from his construction in the Joint Claim Terms Chart, and it is therefore waived. Dkt. 26 at 3 (requiring circulation of amended constructions by December 1, 2020, and filing of the Joint Claim Terms Chart by December 9, 2020). And Judge Hellerstein did *not* adopt this construction. Dkt. 50-1. The new construction also introduces numerous additional limitations that have no support in the claim language or specification, and would run counter to the understanding of a person of ordinary skill in the art. *See* Supp. Schmidt Decl. ¶¶ 24-25.

B. Terms from the '801 Patent

1. “automatically construct [a representation of data from a row of the primary table]”

Salesforce's Proposed Construction	Kaufman's Proposed Construction
“construct without any custom software programming or any other user intervention”	This term should be construed instead as the term “automatic(ally),” consistent with the term in the '981 patent, i.e., “No separate developer input is required.”

Kaufman agrees that this term should be construed consistent with the term “automatically generating” (or “automatically”) in the '981 patent. Kaufman Br. at 19. The parties are in accord. *See also* Schmidt Decl. ¶ 53 (terms should be construed together).

2. “primary table” / “foreign table”

Salesforce's Proposed Construction	Kaufman's Proposed Construction
<p>“primary table”: “table stored in a back-end RDBMS that contains an FK column that references the PK column of the foreign table”</p> <p>“foreign table”: “table stored in a back-end RDBMS that contains a PK column that is referenced by the FK column of the primary table”</p>	<p>“primary table”: Plain and ordinary meaning</p> <p>“foreign table”: Plain and ordinary meaning</p>

As with terms above, Kaufman avoids any analysis of intrinsic evidence and instead

asserts that these terms should be construed as “plain and ordinary meaning.” *See Choon’s Design*, 776 F. App’x at 696; *United Video*, 561 F. App’x at 918; *Lexion*, 641 F.3d at 1356.

Kaufman concedes that Salesforce’s constructions for “primary table” and “foreign table” are correct, except for “stored in a back-end RDBMS.”² However, the intrinsic evidence dictates this aspect of Salesforce’s construction. Supp. Schmidt Decl. ¶¶ 36-37. The claims confirm that the primary and foreign tables are stored in a back-end relational database management system. *Id.*; Schmidt Decl. ¶ 75; ’801 patent at 7:38-61; 8:25-30. Independent claim 1 recites a method for displaying “an enhanced representation of data *from* a relational database” that comprises “a primary table and a foreign table,” and claim 2 references “the tables *within* the [relational] database.” *Id.* at 36:20-57 (emphasis added). The specification also confirms that the primary and foreign tables are stored in a back-end RDBMS. Supp. Schmidt Decl. ¶ 38. The specification describes developing a RDBMS by defining a “back-end for storing data (that is, the complement of tables which store data, and the relational links between those tables),” and a “front-end program” by which users can interact with the data. ’801 patent at 7:1-13; 6:58-67; 7:55-61 (“among the tables within the back-end”); 8:25-30 (“extending the representation of table structures, constraints, and relationships within the back-end”); 12:49-51 (“system automatically generates a corresponding back-end ‘view’ for every table”). The specification describes naming conventions that are “used for enhancing and extending the representation of the table structures and relationships (*entirely within the back-end representation of the data model*, in the reference implementation).” *Id.* at 16:10-48 (emphasis added).

The prosecution history of the ’801 patent further informs one of skill in the art that tables are stored in a back-end RDBMS. *Liqwd, Inc. v. L’Oreal USA, Inc.*, 720 F. App’x 623,

² Kaufman provides only bare attorney argument—no citation to case law, claims, specification, or sworn testimony of a POSITA—supporting its positions for these terms or for the primary and foreign key terms. *See, e.g., Icon*, 849 F.3d at 1043 (Fed. Cir. 2017) (“Attorney argument is not evidence.”).

626-27 (Fed. Cir. 2018) (relying on statements in prosecution history to construe the recited term “hair coloring agent”); Supp. Schmidt Decl. ¶ 39. Kaufman stated during prosecution that the patent “involves a system for giving a user access, through a user interface, to the *data contained within* an already-existing (and unchanging) *database structure*,” which a POSITA would understand refers to the back-end RDBMS. Ex. 28 at 11 (emphasis added); Supp. Schmidt Decl. ¶ 39. Kaufman asserted that the “present application . . . interrogates the structure of relationships among all tables within the database (e.g., in order to form composite representations of data across tables, for the benefit of end-users).” Ex. 28 at 12. In Kaufman’s own words, the aim of the patent was to provide a user interface by “working with the data *within* a relational database,” or in terms well-known to a POSITA, within the back-end RDBMS. *Id.* at 9 (emphasis added). In light of this, a POSITA would understand the recited primary and foreign tables are stored in a back-end RDBMS. Supp. Schmidt Decl. ¶ 39.

Kaufman objects to the phrase “tables stored in a back-end RDBMS” arguing that the primary and foreign tables are not necessarily stored there. However, Kaufman provides no intrinsic evidence or explanation as to *why* the recited tables would be stored somewhere else; such bare argument is on its face insufficient. *Va. Innovation Scis., Inc. v. Samsung Elec. Co., Ltd.*, 614 F. App’x 503, 511 (Fed. Cir. 2015) (explaining that “attorney arguments are not relevant intrinsic or extrinsic evidence” for claim construction). Indeed, Kaufman, in its brief lends support to Salesforce’s construction by conceding that each database table can be cross-referenced “from any tables *within* that database (*e.g.*, a table of departments might be related to a table of employees which includes ‘pointers’ (cross-references) to each employee’s department).” Kaufman Br. at 1 (emphasis added); *see id.* at 2 (“working with data across tables *in* the database”) (emphasis added). In view of the above, a POSITA would interpret the claims

according to Salesforce’s constructions, wherein the primary and foreign tables are stored in a back-end RDBMS. Schmidt Decl. ¶¶ 41-44, 72-78; Supp. Schmidt Decl. ¶ 40.

Kaufman also asserts without any support that the terms “primary table” and “foreign table” are known to a “person of skill in the art.” Kaufman Br. at 19-20; *Va. Innovation Scis.*, 614 F. App’x at 511. However, these terms do not exist in a vacuum, but must be informed by the intrinsic evidence, which Kaufman ignores. Salesforce presented intrinsic and extrinsic evidence as well as the opinion of a POSITA supporting Salesforce’s construction. Schmidt Decl. ¶¶ 72-78. Absent a clarifying construction like those proposed by Salesforce, the meaning of these technical terms would not be readily apparent to a layman juror. *O2 Micro*, 521 F.3d at 1360; *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1319 (Fed. Cir. 2016).

3. “primary key (PK) value” / “foreign key (FK) value”

Salesforce’s Proposed Construction	Kaufman’s Proposed Construction
PK value: “value contained in a column of a table record that uniquely identifies the record in the table”	PK value: Plain and ordinary meaning
FK value: “value contained in a column of a primary-table record that uniquely identifies a single foreign-table record”	FK value: Plain and ordinary meaning

Kaufman again (improperly) asserts that these terms should be construed according to their “plain and ordinary meaning” in a vacuum without analysis of intrinsic evidence. *See Choon’s Design*, 776 F. App’x at 696; *Lexion*, 641 F.3d at 1356. First, Kaufman alleges—absent any evidence—that “primary key (PK) value” and “foreign key (FK) value” do not need to be construed because they are “foundational” in database technology and “known to persons of skill in the art.” Kaufman Br. at 20-21; *see Va. Innovation Scis.*, 614 F. App’x at 511 (attorney argument is insufficient evidence); *see Supp. Schmidt Decl. ¶¶ 13-14*. Salesforce has demonstrated Kaufman is mistaken on both counts, and provides intrinsic and extrinsic evidence

in uniform support of its constructions. Dkt. 48 at 22-25; Supp. Schmidt Decl. ¶¶ 42-46.

Kaufman next alleges that Salesforce’s constructions are “overly limiting” because they specify only a single column as the source of the PK/FK values. Kaufman Br. at 20-21. However, Salesforce’s constructions are defined by the claims and other intrinsic evidence. First, the claims require that the PK/FK values are contained in a single column (foreclosing an interpretation that they are contained in multiple columns). Supp. Schmidt Decl. ¶ 43. For “foreign key (FK) value,” claim 1 recites identifying “a foreign key (FK) value in *an* FK column in the primary-table row, wherein *the* FK column references the foreign table.” ’801 patent at 36:33-35; *see Harari v. Lee*, 656 F.3d 1331, 1341 (Fed. Cir. 2011) (“When the claim language and specification indicate that ‘a’ means one and only one, it is appropriate to construe it as such”); ’801 patent at 11:28-29 (defining foreign key as a “single primary-table record keeps pointer to any single foreign-table record”). Claim 1 then recites selecting “a value” and supplanting the FK value with a description using the selected value—*not* supplanting multiple FK values across several columns. ’801 patent at 36:47-51. For “primary key (PK) value,” claim 1 recites locating a single row by its PK value (which “matches the identified FK value”). *Id.* at 36:36-38. Because the FK value is a single value in a single column, the matching PK value must also be a single value in a single column (there can only be one matching PK value that uniquely identifies a record in a table—a fact Kaufman does not contest). Schmidt Decl. ¶¶ 42, 82-84; Dkt. 50-23 at 9:1-32; ’801 patent at 11:45-48, 20:36-40; Supp. Schmidt Decl. ¶ 43.

Kaufman could have claimed that the PK/FK values are contained in multiple columns but chose not to. This is especially true in light of Kaufman’s decision to draft the preamble of claim 1 to recite “a plurality of columns.” Instead, Kaufman set a clear boundary of a *single* column source for PK/FK values, foreclosing a broader interpretation of multiple columns as a

source of the PK/FK values that Kaufman now proposes should be covered by the claims. In view of the claims as discussed above, A POSITA would thereby interpret the claims according to Salesforce's constructions in view of the express claim language, wherein the term PK value is "a value contained in a column of a table record" and the term FK value is "value contained in a column of a primary-table record." Schmidt Decl. ¶¶ 41-44, 79-92.

This interpretation is consistent with other intrinsic evidence. The specification describes a foreign key value as a "single primary-table record [that] keeps pointer to *any single* foreign-table record." '801 patent at 11:27-29 (emphasis added). In addition, U.S. Patent No. 5,873,093 cited on the face of the '801 patent defines a "foreign key" as a "column that is the primary key of another table." Dkt. 17 at 8:1-8; *see also* Dkt. 14 at 1:33-36; Supp. Schmidt Decl. ¶ 44.

Extrinsic dictionaries contemporary with the claimed inventions also accord with Salesforce's construction. Dkt. 15 at 355 (defining "primary key" as "the key field that serves as the unique identifier of a specific tuple (row) in a relation (database table)); Dkt. 16 (defining "foreign key" as "[i]n a relation, a column whose data values correspond to the values of a key column in another relation."); Schmidt Decl. ¶¶ 83, 90; Supp. Schmidt Decl. ¶ 45.

Forgoing construction here would only invite Kaufman to impermissibly broaden claim scope opportunistically, for example, by defining PK/FK values as contained in multiple columns of a table, and thus Kaufman's proposed plain and ordinary meaning construction should be rejected. *See O2 Micro*, 521 F.3d at 1360; *Eon Corp.*, 815 F.3d at 1319.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Kevin P.B. Johnson, hereby certify that on January 29, 2021, I caused a true and correct copy of the foregoing document to be served upon counsel for Plaintiff by ECF.

Date: January 29, 2021

/s/ Kevin Johnson
Kevin P.B. Johnson